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Digital well-being as an educational challenge: a mapping review study

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Abstract

Digital well-being in educational contexts is becoming increasingly important in educational policies, teaching processes and research. However, due to the dynamic nature of the topic, a deeper conceptualisation of the whole phenomenon is lacking. This review study analyses 15 Web of Science studies related to this area and identifies the key themes and components of the phenomenon in relation to educational practice. Explicitly: the inappropriateness of using simple metrics such as screen time, the importance of the way digital wellbeing is talked about, the emphasis on the relationship between family and school, the limited possibilities of applications, the need to regulate selected services, and the importance of participatory methods in teaching and developing digital wellbeing, which appears to be changeable through education. The study offers insights into practical educational practice.

Keywords: digital wellbeing; review study; competence; psychology; TikTok; restriction; screen time; scrolling.

1 Introduction

Technology is fundamentally transforming the world we find ourselves in. We live in an information society that has long been viewed with strong optimism (Breivik, 1985; Webster, 1999, 2014; Zlatuška, 1998). This optimistic discourse gradually began to change, with critical theory entering the debate about the nature of society, drawing attention to the discourse of government and corporate power (Elmborg, 2006; Freire, 2014; Irving, 2020), which gradually evolved into a critique of large corporations diminishing human freedom (Bridle, 2018; Dijck et al., 2018). The education space is simultaneously linked to a process of accumulation of crises or polycrises (Beck, 2009; Matějčková, 2023), to which it must respond.

Within this framework, a debate is gradually taking shape about the impact of digital technology on human psychological well-being. Starting from the notion associated with Heidegger, who spoke of living in the drag of technology (Heidegger, 1967) and tried to accentuate the importance of the ontological distinction between humans and technology, we gradually move into the discussion of digital wellbeing (Cecchinato et al., 2019; Giraldo-Luque et al., 2020), its position in the set of digital competencies (Carretero et al., 2017), and its possible relationship with artificial intelligence (Kaya et al., 2025)

This is an area where it is possible to encounter many different approaches that try to move between them. One can see a tradition emphasising the connection between ethics and digital well-being (Burr & Floridi, 2020), which relates to the need to create space for free thinking

and humanity as such. According to Floridi, digital wellbeing is linked to the impact of technology on living a good life. The good life - this category of Greek philosophy - is one of the most commonly used concepts in the ethics of digital wellbeing.

There are discourses associated with a strongly restrictive conception, which seek - ideally - to ban digital devices or to regulate them heavily at least among adolescents or in school settings (Gerosa et al., 2024; Islambouli et al., 2025). At the same time, UNESCO documents show that a techno-pessimistic approach is not inconsiderable (West, 2023). However, we can also see studies that highlight the importance of a balanced approach and the role of education in achieving digital wellbeing (McCoy & Marcus-Quinn, 2025)

From the above, we can say that there are widely varying views on approaching digital wellbeing. Similarly, we can see different approaches associated with achieving it. Some authors lean towards concepts emphasising participation (Lister et al., 2022; Peters & Ahmadpour, 2021) as a prerequisite for actively shaping digital wellbeing at the individual level. It is possible to encounter a group of authors who lean more towards digital minimalism (Newport, 2019) and find the boundaries of where we want to work with technology and where we do not. Floridi highlights the blurring of the boundaries between technology and humans (Floridi, 2015), leading to the belief that the way forward cannot be to exclude technology from life, but rather to seek some dynamic approach (Vanden Abeele, 2021), which in some ways harks back to participatory methods and the need to rethink the world in new and different ways radically (Helgason et al., 2020; Latour, 2021)

This review study will describe what approaches are emerging in digital wellbeing education and how they can be considered and developed. We believe that the ability to work with technology, digital competence, must be linked to a progressively learned ability to critically find ways to use it to one's advantage, to work with it with feelings that are not negative. We believe in digital wellbeing as a digital competence, as the European Framework of Digital Competences for Citizens (Carretero et al., 2017) works with it.

1. 1 Research objectives and questions

This research will analyse the current literary field related to digital wellbeing in educational contexts and establish a thematic analysis of the topic, findings, and associated contexts. Motivation is to identify educational approaches or practical impacts that can be realistically implemented as starting points for educational practice. At the same time, we will focus on academically relevant research, which is included in the Web of Science database and sufficiently cited.

Research question: What key conclusions or themes can be identified in current research on digital well-being in relation to educational policy and practice?

2 Methodology

To develop the mapping review study, we adopted a qualitative approach to look for ways and methods to implement digital well-being education. We aim to create an overview of the knowledge structure in this area that can serve, for example, educational policy makers. Therefore, we chose a qualitative research design. For this, we decided on a survey study as a form.

2.1 Data collection

We search all studies in the Web of Science (WoS) database with the highest academic relevance. Studies listed there can be expected to have both intrinsic quality and integrity, as well as an impact on knowledge, further research, and the use of theoretical knowledge in practice.

- Search query: "digital wellbeing" OR "digital well-being". The term digital well-being is used in both forms in the literature. The usage ratios are relatively balanced. A search of WoS reveals 342 documents containing the term "digital well-being" and 259 documents containing "digital well-being".
- Language limitation: we only searched for studies in English. This is attributable to two factors. Firstly, the linguistic limitations of the author of the study. Secondly, the emphasis on the broader implications of the study. To a certain extent, the selection may be considered arbitrary.
- Geographical limitation: by being a psychological topic, digital wellbeing can be expected to be sensitive to the location of the study, both in terms of data collection and researchers' approach. Therefore, we focused our research on European countries only. A Dutch research team conducted one study, but the data were collected in the USA. Nevertheless, we decided to include it in the research.
- Document limitation: We only included studies in journals. The objective of the present study was to concentrate on studies which had undergone a rigorous review process, which is not necessarily as strict in cases of anthologies or books.
- Time limitation: We only look at studies published after 2022 for timeliness. The rapid development of technology, societal transformation, and other factors significantly

impact the durability of individual findings. It is imperative to emphasise the significance of timeliness to formulate a contemporary perspective on digital wellbeing. Conversely, implementing more stringent time limits was deemed impractical, given the filter's limited applicability.

- Thematic reduction: studies from psychology, education, social sciences and related fields were included in the research. The overarching focus of this study pertained to the domain of education, necessitating the exclusion of the results relating to medical or technical domains.

In this way, we obtained 69 studies (Figure 1), from which we selected the 15 most cited ones, which we carefully reviewed and present in the results section. The notion of citation is regarded as a factor open to scrutiny and should not be considered the sole barometer of a study's quality. Nonetheless, it offers some insight into the influential nature of research and its impact. The review study does not identify the most significant studies, but rather those that have a relevant influence on current professional discourse through citations. These are studies with five or more citations in WoS, demonstrating their (at least partial) influence on academic discourse. Due to carefully chosen filtering criteria, we did not have to exclude any outputs from the search results.

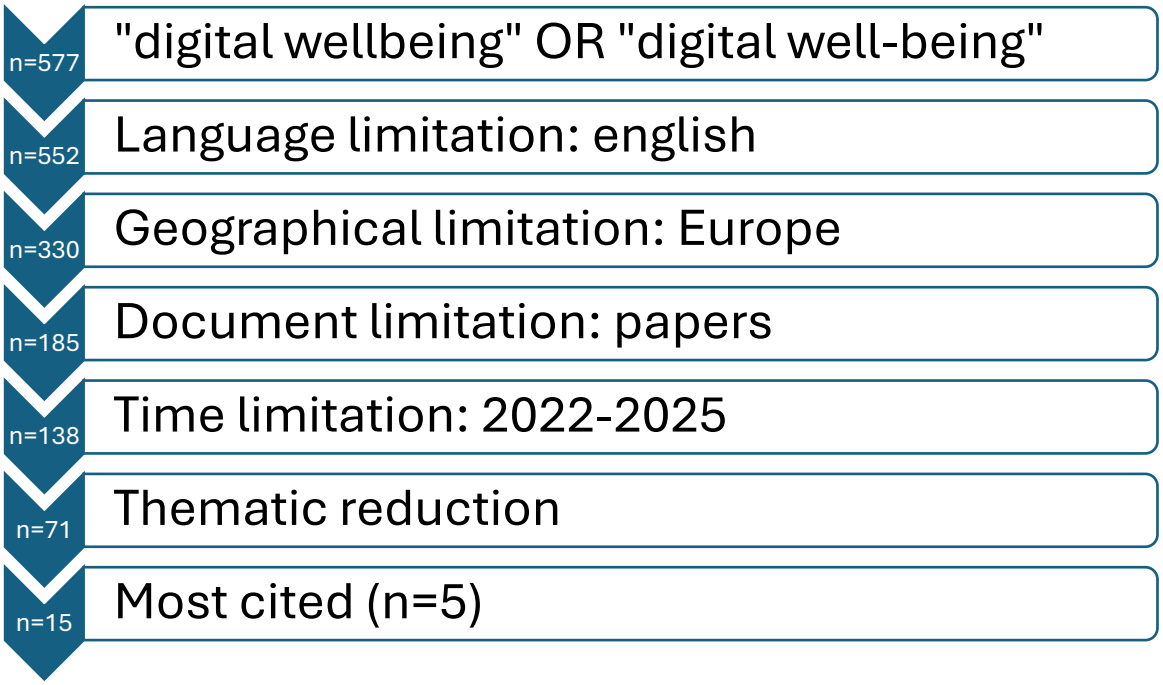

Figure 1. Prisma paper selection diagram

The studies were retrieved on 23 Aug 2025 - the citation feedback results are also valid as of this date. Studies are listed in the results section in order of WoS citation count. The secondary criterion is the date. Individual studies were repeatedly read and monitored for their applicability in education.

2. 2 Representativeness of selection

Studies with high citation rates were selected. To consider how representative their selection can be of the entire set of 46 studies, a simple analysis of keywords in the studies can be performed (Figures 2 and 3). We combine the authors' keywords with the keywords added by WoS. We can see the intersection of most of the words in both samples. In our selection, there is more emphasis on topics related to artificial intelligence. At the same time, we can see a higher degree of consistency and specificity of keywords, which may also affect the citation rate of the results.

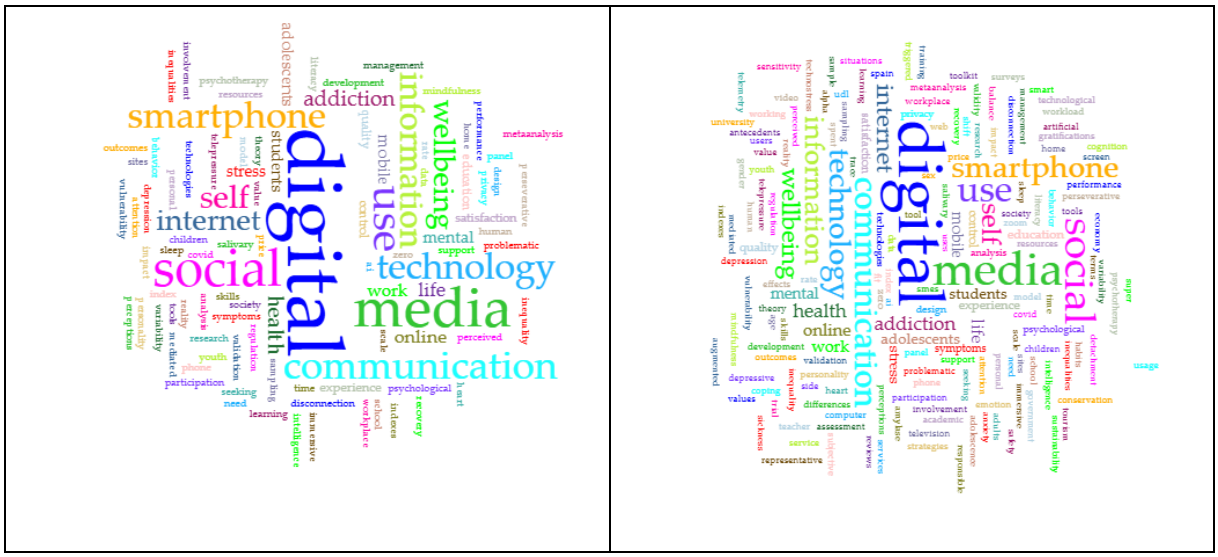

Figure 1. The keywords of all 46 studies are 868 total words and 383 unique word forms. Most frequent keywords: digital (55); media (25); social (24); use (17); communication (15); technology (14); smartphone (14); self (13); information (13); internet (12).

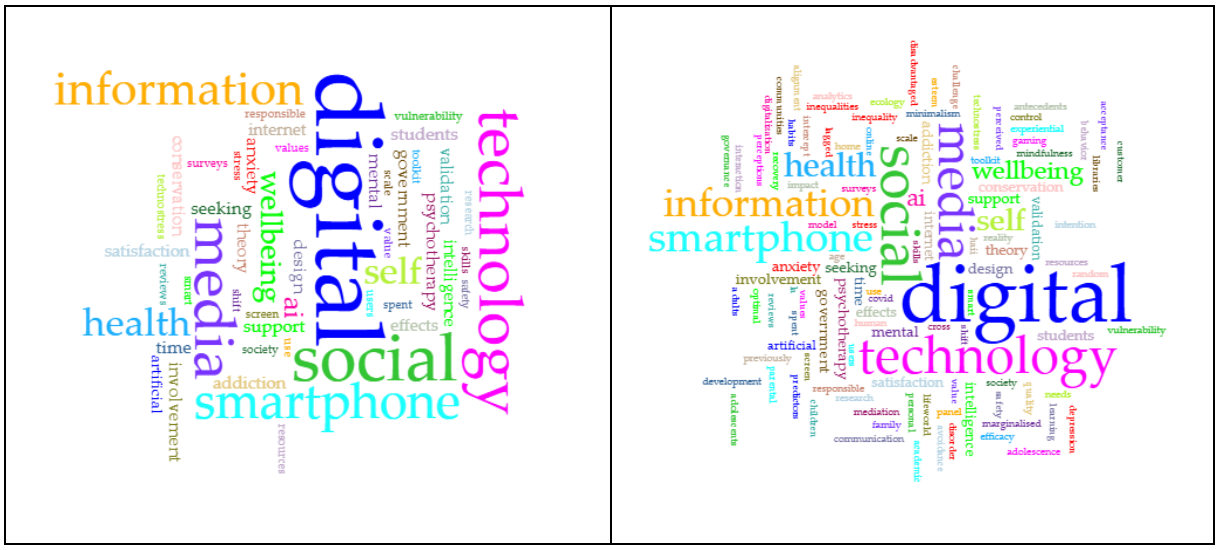

Figure 2. Keywords - 15 studies: 212 total words and 124 unique word forms. Most frequent keywords: digital (16); social (8); technology (7); media (6); smartphone (5); information (5); self (4); health (4); wellbeing (3); AI (3).

2. 3 Limits of research

The main limitation of the research is the sample size, which does not allow for covering all possible approaches and findings. At the same time, the topic appears vast and dynamic, and is only partially covered by the research. A larger sample size would ensure a greater breadth of data, but at the same time, it would bring in less relevant results and would probably not saturate the research population. Our knowledge in this area is strongly partial.

The second limitation is the emphasis on the most cited studies - even less cited studies, or studies cited outside the WoS, can be relevant and of high quality. A related third limit is the choice of database. We recognise that the results are part of a particular academic discourse but are linked to a discourse of power that may be tied to government policy. We do not see the study as complete or definitive; it can be expected to be complemented by studies from local journals and research, from other databases (Scopus), etc.

The last limitation is one of language, but this is a purely formal limitation. If we remove the language filter, the set of studies would be enlarged by two documents in Spanish, but neither of them has any citation feedback. Other than citation feedback, it may be possible to consider other metrics when selecting studies for review. Still, given our research aims, we see citation feedback as a relevant tool for selecting studies.

3 Results

A description of the research sample is recorded in Table 1. The table shows that quantitative research methods (12) dominate our research sample, while qualitative (3) and mixed research designs (1) are the minority. There were no theoretical or review studies in the sample. Regarding states, some are mentioned explicitly, where it is not clear where the data was collected, we take the state where the author's institution is located. This is the dominant part of the target research sample for the target group. The table aims to offer a fundamental insight into the sample, but is somewhat indicative of the critical findings that can be worked with in the quantitative section.

Author	**Quality/ Quantity**	**State**	**Topic**	**Research sample**
Fauville	Quant	Sweden, USA	Zoom	Adults
Gui	Quant	Italy	Media education	High school students
Gennari	Qual	Italy	Social context	High school students
Lyngs	Quant	Irrelevant	App reviews	Whole population
Widdicks	Qual	Sweden, USA	Environmental aspects	College students
Dekker	Quant	The Netherlands	Notification	Undergraduates
Lazou & Tsinakos	Quant	Greece, Bulgaria, Romania	Augmented Reality	High school students
Nguyen & Hargittai	Quant	Netherlands	FOMO	Adults
Rosic	Quant	Slovenia	Testing scale	Adolescents
Wolfers	Quant	Germany (?)	Mothers and stressful situations	Adults
Virós-Martín	Quant	Spain	TikTok	Adolescents

Wolfers	Quant	Netherlands, USA	Parents' feelings	Parents
Lister	Mix	UK	How to teach digital wellbeing	College students
Gerosa	Quant	Italy	The impact of the phone on learning outcomes	Adolescents
Lafton	Qual	Norway	How to talk about digital wellbeing?	Families

Table 1. Overview of further qualitatively analysed studies. In research design, we differentiate between quantity (Quan), quality (Qual), and mixed design (Mix).

3.1 Summary of studies

The study (Fauville et al., 2023) addresses the phenomenon of Zoom fatigue. The Swedish-American research team shows that the feeling of fatigue depends on psychological subjective factors (unpleasant feelings associated with looking in the mirror), but also on experience (more frequent use of video conferencing leads to more fatigue), as well as on social-psychological factors related to the difficulty of working with non-verbal communication with a large number of people to focus on. The research is based on a large-scale (n=9787) quantitative study.

A quantitative research (Gui et al., 2023) from Northern Italy (42 secondary schools, n=789) focused on media education opportunities and their impact on reducing screen time. The data show a small but existing effect of education that works better for girls than boys. The study is optimistic in highlighting the positive impact of media education on pupils' wellbeing while finding no effect of digital competence on screen time.

A design-oriented study (Gennari et al., 2023) from Italy shows the importance of a design approach to understanding digital well-being in students. It sets it as one way to think about the whole issue in more depth and detail. The study's authors offer a comprehensive set of activities for secondary school students, aiming to ensure that well-being is perceived not only as a private phenomenon but also as a social phenomenon with a broader societal impact. This is qualitative research (n=24). The study also highlights the potential of new technologies in the speed and concreteness of prototype development, which is crucial to a design approach to learning.

Many tools promise users gains in digital self-control by reminding them of goals, blocking pages, and many other ways. The study (Lyngs et al., 2022) analysed user reviews (1,529 in total) and tried to look for patterns and concepts that may be functional from the design perspective of such tools. One of the conclusions of this analysis is that users demand and better

evaluate more comprehensive tools than a set of single-purpose tools. The study also shows a relationship between general self-regulation ability and digital well-being. It seems that users who struggle with it often label themselves as ADHD persons or procrastinators, leading to a cycle of learned helplessness. This self-labelling can substantially negatively impact digital well-being, per se.

The study (Widdicks et al., 2022) focuses on a different approach to the limitations of digital technologies in the environmental context. It draws on reflection from a workshop (n=13) for high achievers to think critically about when students need technology and when they do not. The aim was to limit environmental burdens, but as the authors say, to reflect on how working with digital tools is essential to digital wellbeing, including limiting it in a meaningful way.

Turning off notifications is a commonly recommended measure linked to mobile phone use, concentration or digital wellbeing. However, a study by a Dutch team (Dekker et al., 2025) showed that none of this is measurable - that notifications do not distract or reduce a person's attention. But they carry with them two other phenomena. The first is that while the time and manner of phone use have not changed, the sense of control over it has increased. On the other hand, the respondents both felt that they were missing out on something important. The study used quantitative research with university students (n=205).

What feelings do learners have when working in augmented reality? The study's authors (Lazou & Tsinakos, 2023) work with augmented reality learning and suggest learners develop Critical Immersive Activated Literacy, which aims to create a set of skills for learning in digital augmented or virtual reality environments. This new literacy should contribute not only to the ability to learn in such environments, but also to digital wellbeing, the specificities experienced in augmented reality or digital immersive environments. The quantitative study (n=77) focused on students aged between 13 and 17 in Greece, Bulgaria and Romania.

In the context of digital well-being, the relationship between device use and negative or positive feelings is intensely debated. The study (Nguyen & Hargittai, 2024) focused on 105 users who were asked to fill in a questionnaire six times a day; the average age of the respondents was about 40 years old. It turns out that feelings are more complicated than commonly thought. Difficult to measure the individual current psychological influences on users that will have a significant impact. The second (and key) finding is that good feelings with disconnection are associated with being in physical social contact with others and, conversely, if one is disconnected and alone, such a combination creates negative feelings. Thus, the theme of digital wellbeing needs to be much more about social factors and contexts than we have seen.

An important question is how teachers can identify which children are experiencing negative impacts of technology on their well-being. These are the ones that can be targeted for intervention. The study (Rosič et al., 2024) works with the setting of Slovenia, where they conducted interviews (n=5) and subsequently validated the instrument with adolescents (n=161 and n=1040). The output is a measurement tool that combines social, cognitive and emotional aspects. Students in Slovenia show a significant decrease in their perceived cognitive performance due to increasing time spent on digital devices. At the same time, research shows that girls perceive their ability to regulate emotions in digital technologies as lower than that of boys. Students with higher academic profiles are more likely to perceive the negative impacts of technology. The ability to work with digital well-being increases with age.

Phones can be a stress management tool, consistent with how they are commonly used. German researchers (Wolfers et al., 2023) focused on mothers (n=209) and investigated how they deal with stress. It turns out that mothers do not have sophisticated self-regulation strategies for coping with stressful situations with a digital device. However, if it serves any purpose, it is as a distraction or to "forget" or gain distance. The challenge for education may thus be both to reflect on these approaches and to develop specific forms of working with crises and stress using them.

Research (Virós-Martín et al., 2024) on Spanish adolescents (n=737) focuses on TikTok and highlights three important aspects related to its use. Firstly, there are strong gender stereotypes in what content is consumed (fashion, beauty x sports, games). The second important finding is that time does not cause bad feelings in adolescents, but it reduces the ability to self-control. TikTok has similar effects on self-regulation as drugs, so it is essential, say the study authors, to regulate time spent on the devices on the part of parents. The way to go is not an individual ban, but some form of time restriction on TikTok availability.

The study (Wolfers et al., 2025) by Dutch authors (but with a US sample) focused on parents (n=141) and examined their guilt about giving mobile devices to their children. The study notes that many negative phenomena may not be negative in themselves. However, experiencing them in a social context (demonising screen time in children) can lead to negative feelings and adverse effects, including damage to the child-parent relationship. This paper is an essential input into how to talk about digital wellbeing in a way that avoids unnecessary, unintended negative consequences through guilt or stress.

A study with a mixed research design from the UK (Lister et al., 2022) sought to find educational principles for teaching digital wellbeing. It sees participatory methods that allow each participant to be active as essential. At the same time, they emphasise a holistic and

inclusive approach in course design or building a partnership approach to develop the topic. The study shows quite clearly that both the topic of digital wellbeing itself and its combination with non-frontline methods are essential. The research was conducted among academics and university students.

An extensive study from Italy (Gerosa et al., 2024) says that gaining a mobile phone before age 11 significantly reduces digital competence, language skills, math skills, etc. Girls and people from lower socio-demographic backgrounds acquire phones earlier. According to the authors, this creates a new digital divide that is no longer linked to the inability to access the internet or devices, but to the failure to control them.

The family environment plays a key role in developing digital wellbeing, or rather, the values realised and experienced in the family. Families that can talk and discuss values and actions create a better environment for digital well-being than restrictive families (Lafton et al., 2024). Family climate and culture seem to be the ones that have a significant influence on children's complex development, including in the area of digital wellbeing. The study was conducted with interviews with 10 members of different families and focus groups (n=10) with children between 5 and 10 years old.

4 Discussion

The research question of this study was: What key conclusions or themes can be identified in current research on digital wellbeing in relation to educational policy and practice? The following seven themes can be identified based on an analysis of 15 documents. In discussing each theme, summarise the results of this research, supplement them with a discussion in the context of broader studies and the current state of knowledge, and draw educational implications from them.

The first general finding of this review study is that much attention is still being paid to **screen time** or other simple metrics. As much as studies (Vanden Abeele, 2021) show that simple time is not an appropriate metric, but that quality of time, social context and many other variables are involved, it seems that, especially for quantitative studies, this is still the dominant approach (Dekker et al., 2025; Gui et al., 2023; Nguyen & Hargittai, 2024). For educational practice, it can be inferred that focusing on minimising students' time spent on the device is not an effective strategy for working with digital well-being.

How **digital wellbeing is discussed** is crucial - social perceptions and narratives are fundamental to experiencing what interactions are perceived as good and what are not. We suggest that there may also be a factor for differences in perceptions of digital well-being across

generations. A study (Roffarello & De Russis, 2023) demonstrates that narrative is crucial for conceptualising how we relate to technology. This dimension is also noted in the studies in our sample (Lafton et al., 2024; Wolfers et al., 2025). At the same time, it is essential to highlight how users talk about themselves and how they frame themselves (Lyngs et al., 2022), which has implications for their digital well-being. The educational recommendation is a critical but open and balanced collaborative reflective journey of seeking digital wellbeing. Focusing on predominantly harmful or risky factors can lead to a deterioration in the overall well-being of learners. The premises of positive psychology (Seligman, 2011) agree with this statement.

Participatory methods are a fundamental approach to take the topic of digital wellbeing forward and across all age groups (Craven et al., 2019; Martzoukou et al., 2020; Vanden Abeele, 2021). The collaborative sharing of experiences, often associated with prototyping, testing or design thinking, constitutes a critical discourse, as seen in the studies we have analysed (Gennari et al., 2023; Lister et al., 2022). These approaches associated with design thinking (Avsec & Savec, 2019; Pearlman, 2010) are associated with creativity as a tool for achieving meaningful learning, entering the context of everyday life, in the process of attaining a good life with technology that cannot be brought from outside (Burr & Floridi, 2020). Educational recommendations include the use of workshops and the development of prototypes that allow students to formulate their own optimistic scenarios and insights.

Family background and school influence are essential to digital wellbeing (Almourad et al., 2021; Dennis & Ziliotti, 2023). Finding common family values and sharing goals is an important relational parameter in digital well-being. In this respect, it can be considered part of a broader wellbeing, i.e. in a particular broader perspective (Filep et al., 2024; Themelis & Sime, 2019). This fact is also illustrated by the research in our study (Gerosa et al., 2024; Lafton et al., 2024; Wolfers et al., 2025). The educational recommendation is therefore to focus not only on the level of schooling but also to work systematically on the development of the family background in this area.

TikTok and **social media** represent a significant and specific topic related to digital well-being, which has been the focus of a large number of studies (Crepax, 2020; Diefenbach & Anders, 2022; Hellemans et al., 2021) and in a largely negative way (West, 2023). As much as one can find studies accentuating the positive aspects of their use (Collie & Wilson-Barnao, 2020; Khlaif & Salha, 2021), it can be argued that the discourse is shifting towards a strongly negative perception in our study as well (Virós-Martín et al., 2024). What positive aspects social media should bring to adolescents in the long run is questionable. From an educational perspective, collaboration with parents is key, as well as considering other forms of distribution of

interactions and content than those offered by social media, such as through school information systems or special communication platforms.

Apps for gaining self-control and digital well-being are among the traditional themes of research in this area, including emphasising that digital well-being cannot be reduced to a problem of users, but also of corporations and designers (Al-Mansoori et al., 2023; Roffarello & De Russis, 2023). Their potential has not yet been fully exploited and should be given new attention. With excellent possibilities, this topic is linked to participatory tools and methods—studies in our review (Lyngs et al., 2022). In terms of education, they can serve well as elements of reflection or thinking. Still, there seem to be more effective ways to work with digital self-management as it is closely related to self-management per se (Dekker et al., 2025).

At the same time, studies agree that the whole **phenomenon of digital wellbeing is complex** and many factors enter into it (Fauville et al., 2023; Gennari et al., 2023; Gui et al., 2023), which was already pointed out by Vanden Abeele (2021), whose work is still underappreciated in the context of this review study. It seems impossible to formulate some simple advice, procedures and principles. Nevertheless, it is possible to talk about the positive aspects of education in this topic (Gui et al., 2023) or its understanding and development as a specific competence (Lazou & Tsinakos, 2023). At the same time, education can help with more meaningful crisis management, but again, this requires education and not just an intuitive approach (Wolfers et al., 2023). The educational conclusion is therefore that education in this area is not perfect or a complete solution to all problems, as it runs into the determinants of many individual psychologies (Fauville et al., 2023; Rosič et al., 2024), but it still makes sense.

5 Conclusion

This review study shows that digital well-being is a timely and powerful topic that makes sense to research. However, its reading in educational practice is ambivalent. While some studies take the side of restrictions and limitations and consider technology as a form of evil and danger, we believe a more nuanced approach is in order, based on the literature analysed. If we combine the claims of two highly influential studies in this area (Burr & Floridi, 2020; Vanden Abeele, 2021), we can say that the goal of education should be to create the conditions for each individual to lead a good life on their own using technology. The parameter of the "good life" is primarily individual in nature. However, this does not diminish the importance of education and the cultivation of these personal beliefs, nor the importance of a restrictive approach where technology destroys human freedom (Virós-Martín et al., 2024).

Regarding education, the importance of family and school collaboration, participatory methods and approaches, or the overall use of creativity, reflectivity and cooperation in working with this topic can be emphasised. It turns out to be extremely sensitive to personal psychological settings and the sense of social proximity and language-value discourse, in which educational institutions are fundamentally involved. At the same time, it can be said that there does not seem to be much difference between the different groups in the need for participatory methods in the development of digital wellbeing. These works, from the studies we have analysed, are very universal.

At the same time, research has shown that it is essential not to limit oneself to simple metrics such as screen time or the number of notifications in digital wellbeing. It is necessary to consider the quality and social context of digital technology use. School education can make a fundamental contribution through this form of cultivation, quality, and depth.

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